NOTICE OF PUBLIC MEETING
OF THE
PLEASANT GROVE CITY COUNCIL

Notice is hereby given that the Pleasant Grove City Council will hold a **regular meeting at 6:00 p.m. on Tuesday February 10, 2015** in the City Council Chambers 86 East 100 South Pleasant Grove, Utah. This is a public meeting and anyone interested is invited to attend.

AMENDED AGENDA

1. CALL TO ORDER

2. PLEDGE OF ALLEGIANCE

3. OPENING REMARKS

4. APPROVAL OF MEETING'S AGENDA

5. OPEN SESSION

6. CONSENT ITEMS: (Consent items are only those which have been discussed beforehand, are non-controversial and do not require further discussion)

a. City Council and Work Session Minutes:
City Council Minutes for the January 13, 2015 meeting.
City Council Minutes for the January 21, 2015 meeting.

PLEASE NOTE: THE ORDER OF THE FOLLOWING ITEMS MAY BE SUBJECT TO CHANGE.

7. PRESENTATIONS:

A. Recognize Rick Heilbut for his induction into the American Softball Association (ASA) Hall of Fame.

B. Recognize Julia Whetman for her service to the Planning Commission.

C. Rebecca Call, City Council Member from Saratoga Springs, would like to address the EPA issues facing all cities that discharge into Utah Lake.

8. ACTION ITEMS READY FOR VOTE:

A. To consider for adoption a Resolution **(2015-04)** authorizing the Mayor to declare various Fire Department uniforms as surplus and direct that they be disposed of according to the City's policy for disposing of surplus property. *Presenter: Chief Thomas*

9. ACTION ITEMS WITH PUBLIC DISCUSSION:

A. Public Hearing to consider for adoption an Ordinance **(2015-6)** Pleasant Grove City Public Works Standard Specification Manual by adding "Appendix A - Storm Water Technical Manual & Best Management Practices" and UDOT specifications for untreated base and granular borrow materials for road repair, and providing for an effective date. *Presenter: Engineer Lewis* (Continued from the February 3, 2015 meeting)

10. DISCUSSION ITEMS FOR THE FEBRUARY 17, 2015 MEETING.

11. ITEMS FOR DISCUSSION – NO ACTION TAKEN:

A. Discussion on the Public Safety Building.

12. NEIGHBORHOOD AND STAFF BUSINESS.

13. MAYOR AND COUNCIL BUSINESS.

14. SIGNING OF PLATS.

15. REVIEW CALENDAR.

16. EXECUTIVE SESSION TO DISCUSS THE CHARACTER, PROFESSIONAL COMPETENCE, OR PHYSICAL HEALTH OF AN INDIVIDUAL. (UCA 52-4-205 (1) (a))

17. ADJOURN.

CERTIFICATE OF POSTING:
I certify that the above notice and agenda was posted in three public places within the Pleasant Grove City limits and on the State (http://pmn.utah.gov) and City websites (www.plgrove.org).

Posted by: /s/ Kathy T. Kresser, City Recorder
Date: February 6, 2015 Reposted February 9, 2015 at 10:00 a.m.
Time: 5:00 p.m.
Place: City Hall, Library and Community Development Building

Supporting documents can be found online at: *http://www.plgrove.org/pleasant-grove-information-25006/staff-reports-78235*

*Note: If you are planning to attend this public meeting and due to a disability, need assistance in understanding or participating in the meeting, please notify the City Recorder, 801-785-5045, forty-eight hours in advance of the meeting and we will try to provide whatever assistance may be required.

RESOLUTION NO. 2015-04

A RESOLUTION OF THE GOVERNING BODY OF PLEASANT GROVE CITY AUTHORIZING THE MAYOR TO DECLARE VARIOUS FIRE DEPARTMENT UNIFORMS AS SURPLUS PROPERTY AND DIRECT THAT THEY BE DISPOSED OF ACCORDING TO THE CITY'S POLICY FOR DISPOSING OF SURPLUS PROPERTY; AND PROVIDING FOR AN EFFECTIVE DATE.

WHEREAS, the Pleasant Grove City Fire Department has various uniforms that are no longer in service; and

WHEREAS, the City has established a process for selling or disposing of surplus property; and

WHEREAS, the Fire Department would like the Mayor to declare 62 Blue Uniform Nomex Pants, 54 Blue Uniform Nomex Shirts, 5 Black Cargo Pants and 4 White Dress Uniform Shirts as surplus and be disposed of according to the City's policy; and

WHEREAS, the City Council finds that it is in the best interests of the City to divest itself and recoup some of the costs by selling said surplus property.

NOW THEREFORE, BE IT RESOLVED by the City Council of Pleasant Grove, Utah as follows:

SECTION 1.

The Mayor hereby declares 62 Blue Uniform Nomex Pants, 54 Blue Uniform Nomex Shirts, 5 Black Cargo Pants and 4 White Dress Uniform Shirts as surplused and directs that they be disposed of according to the City's policy for disposing of surplus property.

SECTION 2.

The provisions of this Resolution shall take effect immediately.

PASSED AND ADOPTED BY THE CITY COUNCIL OF PLEASANT GROVE, UTAH, this 10th day of February, 2015.

_____
Michael W. Daniels, Mayor

ATTEST: **(SEAL)**

_____
Kathy T. Kresser, CMC, City Recorder

ORDINANCE NO. 2015-6

AN ORDINANCE OF THE CITY COUNCIL OF PLEASANT GROVE CITY, UTAH COUNTY, UTAH, AMENDING THE PUBLIC WORKS STANDARD SPECIFICATIONS AND DRAWINGS MANUAL BY ADOPTING "APPENDIX A" STORM WATER TECHNICAL MANUAL AND BEST MANAGEMENT PRACTICES AND ADOPTING UDOT SPECIFICATIONS FOR UNTREATED BASE AND GRANULAR BORROW MATERIALS FOR ROAD REPAIR; AND PROVIDING FOR AN EFFECTIVE DATE. (CITY WIDE IMPACT)

WHEREAS, the City Council finds it necessary to update its standard specifications and drawings manual; and

WHEREAS, the updates reflect needed changes to construction standards at the request of Public Works, Planning, and Engineering. Many of the changes are minor corrections or clarifications needed to reflect current practice. Others address changing needs of Public Works due to issues relating to the maintenance of public improvements or to update the standards to reflect changing construction practices; and

WHEREAS, this new standard and specification will designate guidelines for compliance with Pleasant Grove City Code, Title 10 "Zoning" and Title 11 "Land Use and Development;" and

WHEREAS, the City Council finds it in the best interest of the citizens in Pleasant Grove City to amend the Public Works Standard Specification and Drawing Manual by adopting "Appendix A - Storm Water Technical Manual & Best Management Practices" and UDOT specifications for untreated base and granular borrow materials for road repair.

NOW, THEREFORE, BE IT ORDAINED by the City Council of Pleasant Grove City, Utah County, State of Utah as follows:

SECTION 1. The City Council of Pleasant Grove City, Utah County, State of Utah, does hereby amend the Public Works Standard Specification and Drawing Manual by adopting "Appendix A - Storm Water Technical Manual & Best Management Practices" which is attached hereto as Exhibit "A" and UDOT specifications for untreated base and granular borrow materials for road repair, which is attached hereto as Exhibit "B".

SECTION 2. SEVERABILITY. The sections, paragraphs, sentences, clauses, and phrases of this Ordinance are severable. If any such section, paragraph, sentence, clause, or phrase shall be declared invalid or unconstitutional by the valid judgment or decree of a Court of competent jurisdiction, such invalidity or unconstitutionality shall not affect the validity or constitutionality of any of the remaining sections, paragraphs, sentences, clauses or phases of this Ordinance.

SECTION 3. EFFECTIVE DATE. This ordinance shall take effect immediately upon its passage and posting as provided by law.

SECTION 4. APPROVED AND ADOPTED AND MADE EFFECTIVE by the City Council of Pleasant Grove City, Utah County, Utah, this 10th day of February, 2015.

Michael W. Daniels, Mayor

ATTEST:

(S E A L)

Kathy T. Kresser, CMC
City Recorder

APPENDIX A

STORM WATER TECHNICAL MANUAL & BEST MANAGEMENT PRACTICES

(Updated January 2015)

STORM WATER TECHNICAL MANUAL

A. INTRODUCTION

The Storm Water Technical Manual contains requirements for land development and construction activities as well as design criteria and guidelines for those performing such activities. It includes best management practices applicable to development and construction activities. It also includes the plan submittal requirements. The City Engineer has authority to modify the requirements of the Storm Water Technical Manual as needed to accomplish reasonable and effective storm water pollution prevention objectives.

B. REQUIREMENTS FOR PROPOSED DEVELOPMENTS

1. **Incorporate best management practices (BMPs) into development design to limit quantity of runoff and preserve quality of runoff**

   Storm water BMPs must be considered throughout the development process. PART 4, CONSTRUCTION AND LONG-TERM BEST MANAGEMENT PRACTICES (formerly Post Construction) of the Pleasant Grove Storm Water Management Program contains fact sheets for BMPs whose use Pleasant Grove City encourages. Section F.2, Storm Water Quality Criteria of this Storm Water Technical Manual identifies BMPs that are required on all Construction Site Storm Water Management Plans.

2. **Prepare Construction Site Storm Water Management Plan**

   A Construction Site Storm Water Management Plan must be prepared and submitted with the development plans for approval. This requirement applies to all developments (other than construction of a single family home, with associated on-site improvements). See section G of this chapter, CONSTRUCTION SITE STORM WATER MANAGEMENT PLAN CONTENTS for the required contents of the plan.

3. **Provide financial guarantee that improvements contained in the Construction Site Storm Water Management Plan will be installed and maintained**

   Financial guarantee must be posted with Pleasant Grove City prior to beginning construction. In the case of a subdivision of land, this will be included in the bond that is required for the cost of the subdivision improvements. In the case of site improvements, rather than a financial guarantee, non-monetary methods of enforcement already in place in Pleasant Grove City (business licenses, utility services, building and occupancy permits) are available to encourage compliance with the improvements contained in the approved Construction Site Storm Water Management Plan.

   At the time of development, the developer shall provide an estimate of the cost of the required improvements. The City will review the estimate and establish the dollar amount of the financial guarantee.

4. **Prepare Long-Term Storm Water Management Plan for new development and re-development**

   A Long-Term Storm Water Management Plan must be prepared and submitted with the development plans for approval. This requirement applies to all developments and re-developments in which private improvements are constructed (except construction of single family homes, with associated on-site improvements). See section H of this chapter, LONG-TERN STORM WATER MANAGEMENT PLAN CONTENTS for the required contents of the plan.

5. **Obtain UPDES Permit (all sites having land disturbance area equal to or greater than 1 acre)**

   Developments having a disturbed area of 1 acre or more require a UPDES Storm Water General Permit for Construction activities from the Division of Water Quality of the Department of Environmental Quality of the State of Utah.

   Obtaining the permit requires preparation of a Storm Water Pollution Prevention Plan (we would expect that the Construction Site Storm Water Management Plan previously described would suffice) and a Notice of Intent. Information regarding this process is available at: http://www.waterquality.utah.gov/UPDES/stormwater.htm. The developer must submit a copy of the Notice of Intent to the City before the site plan or improvement plans will be considered finalized.

   Note that when a development of over 1 acre in size is phased, the permit is required for each phase, even if each phase is less than 1 acre in size.

C. REQUIREMENTS FOR CONSTRUCTION ACTIVITIES (OTHER THAN THOSE ASSOCIATED WITH INDIVIDUAL RESIDENTIAL STRUCTURES)

1. **Provide instruction to construction site operators regarding the Construction Site Storm Water Management Plan**

   Prior to beginning work, developers and contractors must provide appropriate instruction to on-site construction supervisors and operators, regarding the requirements of the Construction Site Storm Water Management Plan. A copy of the approved plan must be present at the construction site.

2. **Following Construction Site Storm Water Management Plan**

   The improvements shown in the approved Construction Site Storm Water Management Plan must be constructed as indicated in the plan. The appropriate activities outlined in the Construction Site Storm Water Management Plan must be performed prior to any other construction activities on the site. Pleasant Grove City encourages modifications to the plan, when needed, to improve storm water management in light of site conditions. However, variations from the plan that reduce or eliminate elements of the plan must

only be done with the approval of the Pleasant Grove City Public Works Representative or City Engineer.

3. **Monitor effectiveness of the elements included in the Construction Site Storm Water Management Plan, and make improvements as necessary to achieve the plan objectives.**

   After initial implementation of the improvements outlined in the approved Construction Site Storm Water Management Plan, rainfall activity will provide opportunity to observe the effectiveness of the storm water management improvements. Those responsible for construction activities must monitor the in- place storm water management improvements to assess their effectiveness; they must then make adjustments to the improvements as needed to accomplish effective storm water management.

4. **Provide verification that improvements were constructed as approved**

   Following implementation of the improvements contained in the Construction Site Storm Water Management Plan, the preparer of the plan shall provide Pleasant Grove City with a statement as to the condition of the improvements contained in the plan. The statement shall be made on a copy of the Construction Site Storm Water Management Plan document, and shall be signed.

   If the improvements were constructed as approved, it shall include language verifying such. If the improvements were not constructed as approved, it shall state the differences, the reason for the differences, and provide an opinion as to the adequacy of the constructed improvements. This statement must be provided to Pleasant Grove City at the time record drawings are submitted (in the case of public improvements) or prior to issuance of an occupancy permit (in the case of private site improvements)

D. REQUIREMENTS FOR CONSTRUCTION ACTIVITIES ASSOCIATED WITH INDIVIDUAL RESIDENTIAL STRUCTURES

1. **Construction Site Storm Water Management Plan**

   While the Public Works Representative or City Engineer may require that a Construction Site Storm Water Management Plan be created on individual residential lots in special circumstances, generally no lot-specific plan is required.

2. **Sediment Control on Small Construction Sites**

   The BMP fact sheet for Sediment Control on Small Construction Sites (SCSCS) is to be included as a part of the building permit. This BMP applies to construction and landscaping activities associated with individual residential structures, and shall be followed.

3. **Owner or operator shall make adjustments to practices as needed to prevent storm water pollution**

   Sediment that is left in the street or on adjacent lots is evidence of inadequate sediment control. Where storm water pollution prevention measures are inadequate, or are not being properly followed, the Public Works Representative, Community Development Representative or City Engineer may refuse to perform inspections or shut down work on the project.

E. REQUIREMENTS FOR EXISTING DEVELOPMENTS

1. **Following approved Long-Term Storm Water Management Plan**

   The owners of existing developments are responsible to maintain improvements and observe practices that were part of an approved Long-Term Storm Water Management Plan. Failure to adhere to the plan may result in failure of the City to renew business licenses, fines, or other action as prescribed by Pleasant Grove City Code.

2. **Operator or owner makes adjustments to practices or improvements when necessary to achieve Long-Term Storm Water Management Plan objectives**

   Pleasant Grove City encourages adjustments to the plan that enhance effective storm water management. However, significant reduction of practices contained in the plan is to be accomplished through formal modification of the plan and resubmission to the Development Review Committee (or designee) for approval.

F. STORM WATER PERFORMANCE CRITERIA AND DESIGN GUIDELINES

The following storm drainage criteria and design guidelines apply to all storm drainage plans in Pleasant Grove and shall be used in storm drainage calculations. The City Engineer has authority to modify the criteria and guidelines as needed to meet changing or unusual needs or conditions.

1. **Storm water quantity criteria & design guidelines**

   A. Design Storm

      i. Frequency
         a. Design piping system for a 25-year storm and detention for a 10-year storm
         b. Control the point of discharge and the flooding hazard of a 100-year storm
         c. Design piping and detention systems for a 100-year storm in those areas identified in the City's most recent Storm Water Master Plan as requiring the higher standard.
      ii. Depth and Intensity— site specific per the following Website: http://hdsc.nws.noaa.gov/hdsc/pfds/pfds_map_cont.html?bkmrk=ut

B. Runoff Coefficients

The design engineer is to calculate a composite runoff coefficient based on surface type and associated runoff coefficient, weighted by the area of each surface type.

C. Inlet Spacing

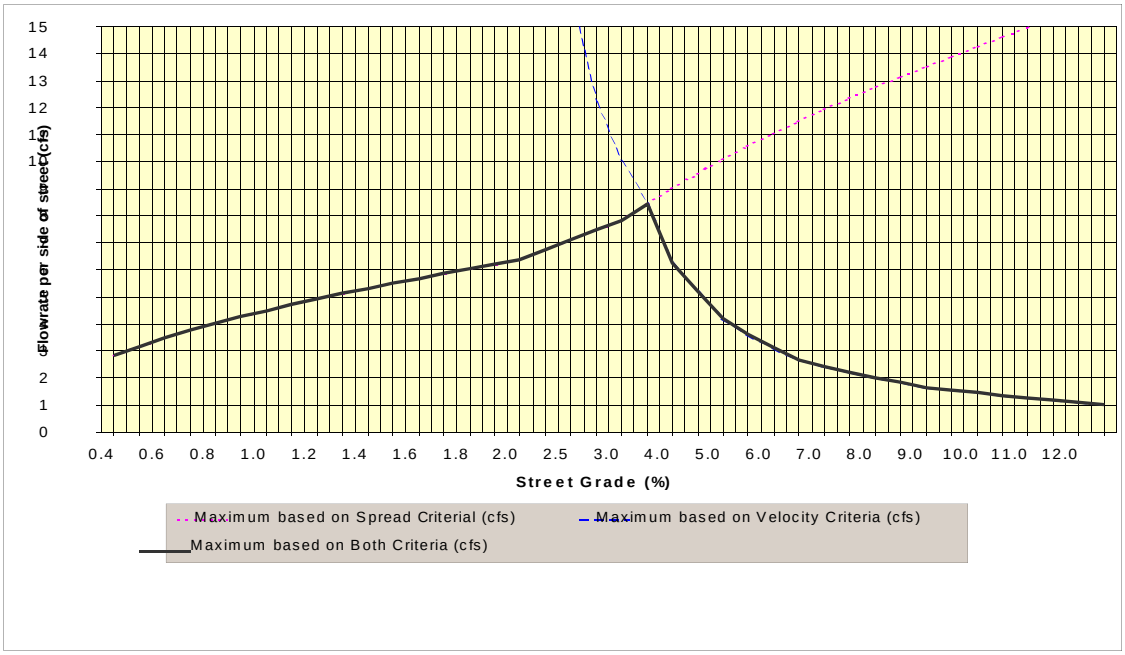
Two criteria must be met:

i. Spread of water in the street—storm water must be delivered from the street into an underground piped system when the spread of water in the street covers the outside 10 feet of asphalt. This will leave two 7-foot traffic lanes in local streets and three 10-foot traffic lanes in collector streets that are not submerged.

ii. Gutter velocity—water must be delivered from the street into an underground piped system when the velocity of water in the deepest part of the gutter reaches 10 feet per second (as a safety consideration).

Each of these requirements is a function of street slope and storm water flow rate. Storm water must be delivered from the street to storm drains when flows reach amounts shown in the following graph:

Maximum Flow Rates Allowed in Streets (25-year storm)



Note: The spread of water in the street is calculated using the Manning Equation in the form developed by Izzard, with a roughness coefficient of 0.013 and the standard street cross section. The velocity criteria calculates the velocity at the deepest part of the gutter with the Manning's Equation, with a roughness coefficient of 0.013, and using a depth at a point six inches from the face of the curb as the hydraulic radius.

D. Inlet Capacity

The designer is to assume 50% blockage of inlets when considering storm drain inlet capacity.

E. Detention

Storm water must be detained such that the peak flow rate released from the site does not exceed 0.15 cubic feet per second per acre (cfs/acre) (0.05 cfs/acre in areas identified in the City's most recent Storm Water Master Plan as requiring the higher standard). The following limitations apply to detention basins:

i. No part of the bottom of a landscaped detention area may be flatter than 1%.
ii. Within 10 feet of the outlet, the slope of a landscaped basin bottom must not be flatter than 3% unless a concrete apron is constructed around the outlet.
iii. Excluding areas within 10 feet of the outlet, the maximum allowable depth of the basin is 3 feet. Basins proposed with greater depths may be allowed with conditions including but not limited to security fencing, escape facilities etc.
iv. Storm drain pipes are to continue through detention areas to allow low flows to proceed through the storm drainage system without having to come to the surface. These low flows must still pass through the outlet restriction that limits runoff rates.
v. Basins are to be designed such that water does not run into them after they reach a maximum depth (unless a free flowing overflow is provided)—this can often be controlled by the elevation of an inlet box in the street adjacent to the basin.
vi. The design drawings for the basin shall include the total basin area, side slopes and width of the berm or height of retaining walls if used, basin depth, storage capacity curve, and design details of the outlet control structure including orifice plate installation.
vii. Side slopes shall not be steeper than 3-feet horizontal to 1-foot vertical (3:1).
vii. Control structures must be in locations accessible to cleaning equipment.

Deviations from this standard may be approved on a case by case basis by the City Engineer given unusual site conditions and/or storm water management objectives.

2. Storm water quality criteria

A. Storm Water Treatment

Prior to discharging storm water, it must be treated to reduce illicit discharges of sediment, oils, floatables and other pollutants. The treatment method must be approved by the City.

B. Use of Best Management Practices

Pleasant Grove City encourages the use of the BMP fact sheets included in PART 4, CONSTRUCTION AND LONG-TERM BEST MANAGEMENT PRACTICES. The following BMPs are required to be a part of all Construction Site Storm Water Management Plans:

* BMP Inspection & Maintenance	BMPIM
* Concrete Waste Management	CWM
* Dust Controls	DC

* Hazardous Waste Management	HWM
* Material Storage	MS
* Portable Toilets	PT
* Spill Clean-Up	SCU
* Vehicle and Equipment Cleaning	VEC
* Vehicle and Equipment Fueling	VEF

There is no list of BMPs that are required on all Long-Term Storm Water Management Plans.

In addition to the required BMPs listed above, other BMPs from PART 4, CONSTRUCTION AND LONG-TERM BEST MANAGEMENT PRACTICES that apply to a given development should be used. Pleasant Grove City also encourages the use of practices in addition to those contained in the Pleasant Grove Storm Water Management Program that may be suitable for a given development. Engineering judgment must be used in selecting BMPs for a given development.

C. Prohibited Practices

The following practices are specifically prohibited:
i. Soil or construction materials may not be piled in streets.
ii. Soil bridges over curb and gutter may not be constructed.

G. CONSTRUCTION SITE STORM WATER MANAGEMENT PLAN CONTENTS

1. Purpose of the Construction Site Storm Water Management Plan

The purpose of the Construction Storm Water Management Plan is to control storm water runoff and reduce pollutants in storm water runoff during construction by accomplishing the following:

A. Controlling soil erosion

B. Controlling discharge of sediment into storm drainage facilities or onto adjacent properties

C. Preventing illicit discharges into on-site soils, into storm drainage facilities, or onto adjacent properties

D. Preventing uncontrolled discharge of storm water to adjacent property

E. Controlling construction waste

F. Controlling dust

2. Contents of the Construction Site Storm Water Management Plan

The Construction Storm Water Management Plan is to be submitted with the site plans or improvement plans, and is to contain at least the following elements:

A. Utilize the standard SWPPP template and instruction provided at the following web-site: http://www.waterquality.utah.gov/UPDES/stormwatercon.htm

B. Plan views shall be provided on 11" x 17" paper

C. Existing and proposed contours as shown on the grading plan

D. Existing and proposed storm drainage improvements

E. Best management practices to accomplish the purpose of the plan – show the following for each BMP specified, as applicable:

   i. Location and extent of specified BMP
   ii. Timing of implementation, possibly in terms of planting season or number of days following commencement of grading
   iii. Duration of implementation
   iv. Any information in addition to or different from that shown on the BMP fact sheet as necessary to employ the BMP on the site

F. BMP Fact sheets or other descriptive material for all specified BMPs

G. Proposed re-vegetation—show the following:

   i. Location and type of re-vegetation proposed
   ii. Timing of re-vegetation, possibly in terms of planting season or number of days following commencement of grading

H. Sequencing of construction activities and BMPs

I. Name, address & telephone number of individual who has responsibility for implementation and maintenance of the plan.

J. Final SWPPP plan to be submitted in an 8.5" x 11.0" binder

H. LONG-TERM STORM WATER MANAGEMENT PLAN CONTENTS (previously post-construction)

1. Purpose of the Long-Term Storm Water Management Plan

The purpose of the Long-Term Storm Water Management Plan is to control storm water runoff and reduce pollutants in storm water runoff after construction is complete and the developed site is in operation. This is achieved by accomplishing the following:

A. Controlling soil erosion

B. Controlling discharge of sediment into storm drainage facilities or onto adjacent properties

C. Preventing illicit discharges into on-site soils, into storm drainage facilities, or onto adjacent properties

2. Contents of the Long-Term Storm Water Management Plan

The Long-Term Storm Water Management Plan is to be submitted separate from the site plan or improvement plans. It shall be contained in a manila folder and is to contain at least the following:

A. Name and contact information of the person responsible for long-term maintenance of the storm water system.

B. A Storm Water Maintenance Agreement. This should be filled out completely and ready for review and signature by a City Official.

C. An 11" x 17" copy of the site plan, including vicinity map, proposed contours, permanent storm drainage improvements, landscaping, and best management practices to accomplish the purpose of the plan. Examples of appropriate BMPs may include those addressing operation and maintenance of storm drainage quality control facilities, operation and maintenance of storm water discharge control facilities, maintenance of landscaping, good housekeeping practices, etc. Show the following for each BMP specified:

   i. Location and extent of specified BMPs, as appropriate
   ii. Detailed schedule of execution for each specified BMP, in terms of starting time, duration, frequency, etc., as appropriate
   iii. Any information in addition to or different from that shown on the BMP fact sheets as necessary to employ the BMPs on the site

D. BMP fact sheets or other descriptive material for all specified BMPs. BMP fact sheets that are part of the Long-Term Storm Water Management Plan are to be on a separate sheet from those BMP fact sheets associated with the Construction Site Storm Water Management Plan. Each BMP fact sheet should be printed on a separate 8.5" x 11" paper.

E. Final storm drainage calculations. These should be a finalized set of calculations defined in Section F of this document.

F. The following statement shall prominently appear on the site plan submitted with all Long-Term Storm Water Management Plans:

The owner(s) of the property are responsible to perpetually follow this Long-Term Storm Water Management Plan. Failure to follow the plan may result in the City refusing to renew business licenses or taking other action against the property owner.

The objectives of the Plan are to:

1. Control soil erosion
2. Control discharge of sediment into storm drainage facilities or onto adjacent properties
3. Prevent illicit discharges into on-site soils, into storm drainage facilities, or onto adjacent properties

If the objectives of the Plan are not being met, the site operator or owner shall make adjustments to the Plan as needed to accomplish its purposes.

Pleasant Grove City encourages adjustments to the plan that enhance effective storm water management. However, significant alteration of practices contained in the plan is to be accomplished through formal modification of the plan and resubmission to the City Engineer for approval.

I. PROPOSED CONSTRUCTION AND LONG-TERM STORM WATER MANAGEMENT PLAN REVIEW PROCEDURES

The Construction Storm Water Management Plan and Long-Term Storm Water Management Plan will be submitted to Pleasant Grove City with the development plans. They will be reviewed along with the development plans, with storm water quantity and quality benefits in mind. The review procedure will be the same as for subdivision improvement plans and site plans.

CONSTRUCTION AND LONG-TERM BEST MANAGEMENT PRACTICES

A. BMP Index

Pleasant Grove City encourages the use of the following best management practices on Construction Site and Long-Term Storm Water Management Plans. As established in Section F.2.A of PART 3, STORM WATER TECHNICAL MANUAL, **BMPs with an asterisk are required to be a part of all Construction Site Storm Water Management Plans**

Benching	BE
Biofilters	BF
* BMP Inspection & Maintenance	BMPIM
Brush or Rock Filter	BRF
Building Repair, Remodeling & Construction	BRRC
Catch Basin Cleaning	CBC
Contaminated or Erodible Surface Areas	CESA
Compaction	CP
Construction Road Stabilization	CR
Construction Sequencing	CS
Constructed Wetlands	CW
* Concrete Waste Management	CWM
* Dust Controls	DC
Diversion Dike	DD
Detention/Infiltration Device Maintenance	DIDM
Earth Berm Barrier	EB
Erosion Control Blankets	ECB
Extended Detention Basins	EDB
Filter Strips	FS
Geotextiles and Mats	GM
Grading Practices	GP
Grassed Swales	GS
Hydromulching	HM
* Hazardous Waste Management	HWM
In-Line Storage	ILS
Infiltration	IN
Inlet Protection – Concrete Block	IPC
Inlet Protection – Excavated	IPE
Inlet Protection – Gravel	IPG
Inlet Protection – Silt Fence or Straw Bale	IPS
Level Spreaders	LS
* Material Storage	MS
Mulching	MU
Outlet Protection	OP
Parking Lot Sweeping/Vacuuming	PLSV
* Portable Toilets	PT

Rock Check Dams	RCD
Riprap	RR
Sediment Basin	SB
Sand Bag Barrier	SBB
Street Cleaning	SC
Stabilized Construction Entrance and Wash Area	SCEWA
Sediment Control on Small Construction Sites	SCSCS
* Spill Clean-Up	SCU
Slope Drain	SD
Storm Drain Flushing	SDF
Silt Fence	SF
Seeding and Planting	SP
Surface Roughening	SR
Sediment Trap	ST
Straw Bale Barrier	STB
Temporary Drains and Swales	TDS
Temporary and Permanent Seeding	TPS
Temporary Stream Crossing	TSC
* Vehicle and Equipment Cleaning	VEC
* Vehicle and Equipment Fueling	VEF
Waste Disposal	WD
Wet Ponds	WP

B. BMP FACT SHEETS

The following sheets contain BMP Fact Sheets for use in Pleasant Grove.

February 10, 2015

Section 11.06 GRANULAR BORROW

Add the following:

Material meeting the requirements of UDOT specification 02056, section 2.3 is an acceptable alternative to the requirements above. All related sections of 02056 apply.

Section 11.07 GRANULAR BACKFILL BORROW

Add the following:

Material meeting the requirements of UDOT specification 02056, section 2.4 is an acceptable alternative to the requirements above. All related sections of 02056 apply.

Section 11.09 BASE COURSE

Add the following:

Material meeting the requirements of UDOT specification 02721 is an acceptable alternative to the requirements above.

SECTION 02056

EMBANKMENT, BORROW, AND BACKFILL

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Materials and procedures for construction of embankment, backfill, and bridge approach embankments.

1.2 RELATED SECTIONS

A. Section 02075: Geotextiles

B. Section 02231: Site Clearing and Grubbing

C. Section 02317: Structural Excavation

D. Section 02912: Topsoil

E. Section 03575: Flowable Fill

1.3 REFERENCES

A. AASHTO M 145: Classification of Soils and Soil-Aggregate Mixtures for Highway Construction Purposes

B. AASHTO T 11: Materials Finer than 75 μm (No. 200) Sieve in Mineral Aggregates by Washing

C. AASHTO T 27: Sieve Analysis of Fine and Coarse Aggregates

D. AASHTO T 99: Moisture-Density Relations of Soils Using a 2.5 kg (5.5-lb) Rammer and a 305 mm (12 inch) Drop

E. AASHTO T 180: Moisture-Density Relations of Soils Using a 4.54 kg (10-lb) Rammer and a 457 mm (18 inch) Drop

F. ASTM D 2487: Standard Classification of Soils for Engineering Purposes (Unified Soil Classification System)

G. UDOT Minimum Sampling and Testing Requirements

1.4 DEFINITIONS

A. Well-graded material – Material with a gradation having all particle sizes represented, with a smooth shaped grain-size distribution curve and coefficient of uniformity greater than four and a coefficient of curvature between one and three inclusive. Refer to ASTM D 2487.
   1. Coefficient of uniformity $C_u = D_{60}/D_{10}$
   2. Coefficient of curvature $C_c = (D_{30})^2/(D_{10}D_{60})$
   3. D_{xx} The diameter for which xx percent of the particles are finer.

1.5 SUBMITTALS

A. Provide the following before delivering material to the project:
   1. Supplier and source of materials.
   2. Gradation analysis. Refer to AASHTO T 27 and T 11.
   3. Soil classification when applicable. Refer to AASHTO M 145.
   4. Coefficient of uniformity and the coefficient of curvature when applicable. Refer to ASTM D 2487.
   5. Maximum Dry Density and Optimum Moisture Determination
      a. Use AASHTO T 180 Method D for A-1 soils and AASHTO T 99 Method D for all other soils.

1.6 ACCEPTANCE

A. Acceptance sampling and testing of material is according to UDOT Minimum Sampling and Testing Requirements.

B. Engineer reserves the right to select and test material randomly from any location at the construction site.

C. Density Requirement – Acceptance is on a lot-by-lot basis when average density is not less than 96 percent of maximum laboratory density and no single determination is lower than 92 percent.
   1. Use AASHTO T 180 Method D for A-1 soils and AASHTO T 99 Method D for all other soils.
   2. Maintain appropriate moisture for compaction during processing.

D. Remove any material found defective and replace with acceptable material at no additional cost to the Department.

PART 2 PRODUCTS

2.1 MATERIALS

A. Provide materials free of contamination from chemical or petroleum products for embankment and backfill placements. Materials may include recycled portland cement concrete.
   1. Do not include asphalt pavement materials.

2.2 BORROW

A. Classifications A-1-a through A-4. Refer to AASHTO M 145.

2.3 GRANULAR BORROW

A. Classification A-1-a. Refer to AASHTO M 145.

B. Non-plastic, well-graded, 3 inch maximum.

2.4 GRANULAR BACKFILL BORROW

A. Classification A-1-a. Refer to AASHTO M 145.

B. Non-plastic, well-graded, 2 inch maximum.

2.5 EMBANKMENT

A. Borrow or suitable roadway excavation materials excluding organic, frozen, or contaminated soils. Refer to this Section, article 2.1.

2.6 EMBANKMENT FOR BRIDGE

A. Granular Borrow

2.7 FREE DRAINING GRANULAR BACKFILL

A. Meet the following gradation:

Table 1

Free Draining Granular Backfill Gradation	
Sieve Size	**Percent Passing**
1½ inch	100
1 inch	95 to 100
½ inch	25 to 60
No. 4	0 to 10
No. 200	0 to 5

2.8 FLOWABLE FILL

A. Refer to Section 03575.

2.9 PIPE BEDDING AND BACKFILL

A. Pipe Foundation (As Required)
   1. Use Granular Backfill Borrow.
   2. Use Free-Draining Granular Backfill or other uniformly graded materials only with the approval of the engineer and only if enclosed with an appropriate separation geotextile. Refer to Section 02075.

B. Pipe Bedding and Backfill
   1. Use Granular Backfill Borrow or on-site material excluding unsuitable material.

C. Unsuitable material includes organic materials, frozen lumps, soils such as peat or bog, and over-saturated silts, clays, or sands whose water content prevents appropriate compaction.

PART 3 EXECUTION

3.1 PREPARATION

A. Complete clearing, grubbing, stripping, and stockpiling topsoil before placing embankment. Refer to Sections 02231 and 02912.

B. Excavate and dispose of unsuitable material as directed by the Engineer.

3.2 EMBANKMENT PLACEMENT

A. Place roadway excavation or borrow in embankment section with the highest quality material in the top portion of the embankment.

B. Scarify and compact the top 8 inches of the surface to at least 90 percent of maximum laboratory density when the embankment height is 6 ft or less.

C. Break and scarify all underlying road surfaces so that pieces do not exceed 3 ft^2 before placing embankment over an existing pavement that is outside the limits of removal or excavation shown on the plans.

D. Maintain Drainage
   1. Grade and maintain the roadway to ensure adequate drainage.
   2. Maintain pipe culverts and drainage ditches or provide temporary facilities when interrupting items such as irrigation systems, sewers, and underdrainages.

E. Place an initial layer to act as a working platform over soft, wet ground when approved by the Engineer.
   1. Density specifications do not apply to the working platform.
   2. Meet density requirements for embankment placed above the working platform.

F. The Engineer inspects and accepts the working platform or foundation before embankment is placed.

G. Spread embankment materials uniformly in layers not exceeding 1 ft (uncompacted depth) and compact to the specified density. Reduce the lift thickness if tests show unsatisfactory density.

H. Finish subgrade surface within ±0.1 ft of line and grade.

I. Do not use rock or pavement materials over 1 ft in any dimension. Distribute so space exists for placing and compacting embankment material between large rocks or pavement materials.

J. Do not place large rock within 1 ft of the subgrade surface. Do not allow rocks to protrude above the subgrade surface.

K. Do not use compacting equipment that causes shear failure in the embankment.

3.3 GRANULAR BORROW AND BACKFILL PLACEMENT

A. Finish granular borrow surface within ± 0.1 ft of line and grade.

B. Compact borrow and backfill material in 6 inch layers to the specified density.

C. Structural Backfill Placement includes bridges, foundation, box culverts, pipe culverts, drains, and other structures.
   1. Place suitable backfill material in structural backfill sections. Refer to Section 02317.
      a. Use granular backfill borrow when specified.
   2. Use appropriate compaction equipment adjacent to abutments, backwalls, approach slabs, wing walls, retaining walls, and other structures.

D. Pipe Bedding and Backfill
   1. Refer to Section 02317 and DG Series Standard Drawings for excavation and over-excavation requirements.
   2. Place uniform layers of pipe backfill on both sides of the pipe.
   3. Use compaction equipment smaller than the trench width between the pipe and the trench wall. Fully compact the haunch areas. Hand-tamp areas where compaction equipment cannot compact the soil.

3.4 EMBANKMENT FOR BRIDGE PLACEMENT

A. Construct approach embankments from the original existing ground up with the specified material to the limits defined in this Section and according to DD Series Standard Drawings.
   1. Approach Embankments
      a. Place embankment beneath the bridge except riprap or other specified materials used for MSE walls.
      b. Place embankment from the bridge abutment centerline station to a point measured at least 150 ft away from the abutment along the approach roadway centerline and placed for embankment on the inside of abutments.
      c. Use the specified material throughout the length of the walls where retaining walls are located beyond this delineation.
   2. Intersecting Roadway Embankments
      a. Place embankment from approximate edge of approach roadway at least 60 ft along intersecting roadway centerline.
   3. Adjoining Embankments
      a. Place embankment at least 10 ft outward from edge of approach roadway pavement when adjoining embankment is not an approach embankment.

B. Over-excavate unsuitable material such as soft, springy, organic, or otherwise yielding material at natural ground level as directed by the Engineer.

C. The Engineer inspects and accepts the working platform or foundation before embankment is placed.

D. Spread embankment materials uniformly in layers not exceeding 1 ft (uncompacted depth) and compact to an average of 96 percent maximum laboratory density before placing the next layer. Reduce the lift thickness if tests show unsatisfactory density.

E. Finish surface within ±0.1 ft of line and grade.

3.5 LIMITATIONS

A. Requirements when working during freezing or snowy conditions:
   1. Do not place embankment on frozen or snow-covered areas.
   2. Do not deliver or use frozen material in embankments.
   3. Remove snow and frozen material from embankments, foundations, and borrow areas and furnish embankment material that can be compacted to the specified density.
   4. Remove waste and replace frozen embankment material at no additional cost to the Department.
   5. Measure wasted material and provide quantities to the Engineer.

END OF SECTION

SECTION 02721

UNTREATED BASE COURSE (UTBC)

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Production, construction, and compaction of UTBC used for pavements, shoulders, and incidental construction.

1.2 RELATED SECTIONS

A. Section 01572: Dust Control and Watering

1.3 REFERENCES

A. AASHTO T 11: Materials Finer than 75-μm (No. 200) Sieve in Mineral Aggregates by Washing

B. AASHTO T 19: Bulk Density ("Unit Weight") and Voids in Aggregate

C. AASHTO T 27: Sieve Analysis of Fine and Coarse Aggregates

D. AASHTO T 89: Determining the Liquid Limit of Soils

E. AASHTO T 90: Determining the Plastic Limit and Plasticity Index of Soils

F. AASHTO T 96: Resistance to Degradation of Small-Sized Coarse Aggregate by Abrasion and Impact in the Los Angeles Machine

G. AASHTO T 180: Moisture-Density Relations of Soils Using a 4.54 kg (10 lb) Rammer and 457 mm (18 in) Drop

H. AASHTO T 193: The California Bearing Ratio

I. AASHTO T 255: Total Evaporable Moisture Content of Aggregate by Drying

J. AASHTO T 335: Determining the Percent of Fracture in Coarse Aggregate

K. UDOT Minimum Sampling and Testing Requirements

1.4 DEFINITIONS Not Used

1.5 SUBMITTALS

A. Written report for approval for each aggregate class and source, a minimum of five working days before placement. Include the following:
   1. Aggregate suitability. Refer to this Section, Part 2.
   2. Name of supplier and location of source.
   3. Maximum Dry Density and Optimum Moisture Content and associated test result data. Refer to AASHTO T 180, Method D.
   4. Job mix gradation including single values for each sieve size, No. 4 and finer. The target values must be within the gradation limits of Table 2.

B. Job-mix gradation changes
   1. Refer to this Section, article 3.1.

1.6 ACCEPTANCE

A. Sampling and testing of material is according to UDOT Minimum Sampling and Testing Requirements.

B. Type I Placement – Pavement Section
   1. Use Class A aggregate, Table 1.
   2. The Engineer takes random samples from the grade and tests for moisture, gradation, and laboratory density and performs in-place density determinations.
   3. Meet gradation limits and applicable tolerances of Table 2 for each gradation test. Evaluate each sublot separately and do not average with other sublots.
   4. Meet minimum density test average of 97 percent of maximum laboratory density with no test less than 94 percent.

C. Type II Placement – Incidental includes placement for Curb, Curb and Gutter, Driveways, Pedestrian Access Ramps, Sidewalk, Waterways, Flatwork, and other items of work in the contract to which UTBC is included and not measured or paid for separately.
   1. Use Class A aggregate, Table 1.
   2. The Engineer takes random samples from the grade and tests for moisture, gradation, and laboratory density and performs in-place density determinations.
   3. Meet gradation limits and applicable tolerances of Table 2 for each gradation test. Each sublot will be evaluated separately and not averaged with other sublots.
   4. Meet minimum density test average of 95 percent of maximum laboratory density with no test less than 92 percent.

D. Type III Placement – Shoulder
   1. Use Class A or B aggregate, Table 1.
   2. Adjust moisture content before compaction.

E. Material not meeting the gradation requirements may be allowed to remain in-place at the discretion of the Engineer provided density requirements are met. Additional lots may not be placed until the deficiencies are addressed and corrected.

F. Correct material that does not meet the specified criteria by scarifying, placing additional material, re-mixing, reshaping, and re-compacting when directed by the Engineer. Rework unacceptable material at no additional cost to the Department.

G. Do not place additional material on any unaccepted layer.

H. Remove products found defective after placement and replace with acceptable products at no additional cost to the Department when directed by the Engineer.

PART 2 PRODUCTS

2.1 AGGREGATES

A. Well-graded, clean, hard, tough, durable, and sound mineral aggregates consisting of crushed stone, crushed gravel, or crushed slag, free of organic matter and contamination from chemical or petroleum products, according to Table 1.

Table 1

Aggregate Properties			
	Aggregate Class		
	A	**B**	
Dry Rodded Unit Weight	Not less than 75 lb/ft^3		AASHTO T 19
Liquid Limit/Plastic Index	Non-plastic	PI $\leq$ 6	AASHTO T 89 AASHTO 90
Aggregate Wear	Not to exceed 50 percent		AASHTO T 96
Gradation	Table 2		AASHTO T 11 AASHTO T 27
CBR with a 10 lb surcharge measured at 0.20 inch penetration	70% Minimum	N/A	AASHTO T 193
Two Fractured Faces	50% Min	N/A	AASHTO T 335

B. Establish the job mix (target) gradation for the ¾ inch sieve and finer within the gradation limits. The Job Mix Gradation Tolerance is the allowable deviation from the job mix (target) gradation on the applicable sieves. All other percents passing will be within the gradation limits. Refer to AASHTO T 11 and AASHTO T 27.

Table 2

Gradation Limits		
Sieve Size	**Job Mix Gradation Target Band**	**Job Mix Gradation Tolerance**
1½ inch	100	
1 inch	90 - 100	±9.0
¾ inch	70 - 85	±9.0
½ inch	65 - 80	±9.0
⅜ inch	55 - 75	±9.0
No. 4	40 - 65	±7.0
No. 16	25 - 40	±5.0
No. 200	7 - 11	±3.0

Percent passing based on total aggregate (dry weight) and fine and coarse aggregate with approximately the same bulk specific gravities.

PART 3 EXECUTION

3.1 INSTALLATION

A. Mixing – Provide moisture content of ± 2 percent of optimum at the time of placement. Refer to AASHTO T 180, Method D and AASHTO T 255.

B. Procedures for Changing the Job-Mix Gradation
   1. Submit changes in writing 24 hours before placement for approval by the Engineer.

C. Placing – Place in layers of uniform thickness and compact each layer to a thickness not to exceed a 6 inch depth. Do not place on any frozen surface. Refer to Section 01572.

D. Finishing – Uniform line and grade with surface deviations no more than ⅜ inch in 10 ft in any direction.
   1. Profile Tolerance – Correct any profile deviations greater than ⅜ inch.
      a. Rework minimum of 4 inch lift to achieve homogeneous density.
      b. Determine limits of correction based on extent of deviation.
      c. Continue finishing until existing deviation is less than ⅜ inch.

E. Compaction – Maintain optimum moisture content ± 2 percent.
   1. Use appropriate compaction equipment adjacent to abutments, backwalls, approach slabs, wing walls, retaining walls, and other structures.
   2. Use a minimum of two passes with a roller for Type III placement or as directed by the Engineer.

END OF SECTION

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
1	2  Ground Hog Day!	3 Neighborhood Chair meeting 5:30 p.m. City Council Meeting 6:00 p.m.	4 Curbside Recycle Pickup Day North Route	5	6	7
8	9	10 City Council Meeting 6:00 p.m.	11 Curbside Recycle Pickup Day South Route	12 Planning Commission Meeting 7:00 p.m.	13	14 Valentine's  Day!
15	16 President's Day! City offices are closed. 	17 Neighborhood Chair meeting 5:30 p.m. City Council Meeting 6:00 p.m.	18 Curbside Recycle Pickup Day North Route	19 Board of Adjustment Meeting 7:00 p.m. Historical Preservation Committee Meeting 7:00 p.m.	20	21
22	23	24 City Council Meeting 6:00 p.m.	25 Curbside Recycle Pickup Day South Route	26	27	28
						

Department Staff Meetings

Administrative Services: 1st and 3rd Wed at 8:30 a.m.

Community Development: Wednesdays at 7:30 a.m.

Department Heads: Tuesday at 2:00 p.m.

Fire/EMS: 1st Wednesday of the month at 7:00 a.m.

Library: 1st Friday of the month

Parks: Tuesday at 7:00 a.m. - Recreation: Monday at 4:00 p.m.

Public Safety: 1st Friday of the month at 7:00 a.m.

Public Works: Wednesdays at 6:30 a.m.

FEBRUARY 2015